

09/597,371

E0889

REMARKS

Following entry of the above amendments, claims 1-12, 14-16, 18-22, and 24-28 will be pending. Claim 1 has been amended to clarify its distinction over the prior art, as well as to make incidental changes in wording of the claim. Claim 3 has been amended to add wording further describing the "otherwise unused IEEE address." Claim 8 has been amended in conformance with certain amendments to claim 1. Claim 11 has been amended to include the subject matter of claim 13, which has been canceled, and to add the words "internal communication." Claims 14 and 15 have been amended to avoid dependence upon canceled claim 13. Claim 16 has been amended to include the subject matter of claim 17, which has been canceled. Claim 18 has been amended to add the wording added to claim 3, and to avoid dependence on canceled claim 17. Claims 21 and 24 have been amended to add the words "internal communication." Claims 26-28 have been added.

It is noted that all of the above amendments are made relative to the claims as amended in the Reply filed by facsimile on July 16, 2004, which is believed to have been entered upon the filing of the Notice of Appeal.

Withdrawal of Appeal

It is requested that the pending appeal (filed by submission of a Notice of Appeal by mail on October 18, 2004) be withdrawn.

Prior Art Rejections

Claims 1-12, 14-16, 18-22, 24, and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cheng, U.S. Patent No. 6,459,705 ("Cheng") in view of Shim, U.S. Patent No. 6,088,723 ("Shim"). Withdrawal of the rejections is respectfully requested for at least the following reasons.

Cheng discloses a pair of interfaces for connecting a host computer system 100

09/597,371

E0889

to a computer network. The first interface includes a media access control (MAC) layer 102 connected to the physical layer 108 through a media independent interface (MII) 106. The MAC layer 102 interfaces with the host computer's operating system to allow the host computer to send and receive network data. Col. 3, lines 19-27; Fig. 1. The second interface, a system management controller 110, includes a network interface 120 that in turn includes a transmit MAC layer 122 and a receive MAC layer 124 that interface with the above-identified physical layer 108 over the MII 106. Col. 3, lines 27-32. Cheng discloses that the interfaces may be used for passing data frames from the computer system to the network, and vice versa. Cheng does not disclose sending of internal communication special frames that include physical control information, from one part of a network interface apparatus (where such special frames are created) to another part of a network interface apparatus (where physical layer device control information is extracted from the special frames). Cheng's data frames are not internal communication frames because they are passed on out of Cheng's device.

Shim discloses a system for allowing voice telephone service and ISDN service over optical cable TV lines. Shim discloses a frame control unit 9 that extracts physical layer data, a "Cv value," from ISDN frames, and sends the physical layer data to an HDLC unit 7. Like Cheng, Shim does not disclose sending of internal communication special frames that include physical control information, from one part of a network interface apparatus (where such special frames are created) to another part of a network interface apparatus (where physical layer device control information is extracted from the special frames).

Claim 1 as amended recites a method of communicating within a network interface apparatus, the method including, *inter alia*, creating special internal communication frames in a first part of the apparatus, sending the special frames from the first part of the apparatus through a media access controller to a second part of the apparatus, and extracting physical layer device control information from the special

09/597,371

E0889

frames at the second part. Neither Cheng nor Shim teach or suggest creating an internal communication frame in one part of a device, passing it through a MAC, and extracting physical layer device control information from the special frames. The portions of Cheng relied upon merely disclose passing data frames to and from a computer, through a MAC. This is of course how data frames normally pass from a computer to the network, and vice versa. But Cheng does not teach or suggest creating special internal communication frames, and does not teach or suggest using such internal communication frames to pass control information within a device. The frame creation disclosed in Cheng, col. 3, lines 39-51, is not creation of the recited "internal communication frames," but rather is the creation of frames explicitly "for network transmission by the PHY layer 108."

Shim does not make up for Cheng's deficiencies in this regard, since Shim does not teach or suggest creation of special internal communication frames, and does not teach or suggest using such internal communication frames to pass control information within a device. Shim does discuss extracting physical layer data from ISDN frames that are incoming into the interface device, col. 6, lines 29-33. However, Shim does not teach or suggest that this physical layer data is part of special internal communication frames created within another part of the device. Since neither Cheng nor Shim teaches or suggests the creation of special internal communication frames for communication within a network interface device, claims 1-10 are patentable over Cheng and Shim, either alone or in combination.

In addition, dependent claim 3 recites that the creating the special frames includes placing an otherwise unused IEEE address in the position of a destination address. Nothing in Cheng or Shim teaches or suggests this additional feature. Cheng is relied upon for teaching this feature, in portions that mention compliance with IEEE 802.3. Nothing about this teaches or suggests placing an otherwise unused IEEE address in an internal communication special frame, in the position of a destination

09/597,371

E0889

address. Shim of course does not teach or suggest this feature. Therefore for another reason claim 3 is patentable over Cheng and Shim, either alone or in combination.

Dependent claims 6 and 7 recite additional features that are not believed to be taught or suggested by Cheng or Shim. It is unclear exactly what portions of Cheng are believed to teach the intermediate driver recited in claim 6, and the device driver (through which special frames are passed) recited in claim 7. Elements 104, 106 and 108 of Cheng, which are cited in the Action, are not drivers, nor are they described in Cheng as drivers. In fact, nowhere in Cheng does the term "driver" even occur. If rejections of these claims are maintained, it is requested that the portions of Cheng's device relied upon for teaching these features be specifically cited, with an explanation of how the features are seen as drivers, in order to allow a better reply to be made to the rejections.

Dependent claim 8 as amended recites, *inter alia*, creating additional special internal communication frames in the second part of the apparatus, and passing the additional special frames to the first part of the apparatus. As discussed above, Shim does not teach or suggest creating special internal communication frames. Therefore Shim does not teach or suggest creating and passing such internal communication frames in a pair of opposite directions within an apparatus. Claim 8 is thus patentable over Cheng and Shim for another reason.

Claim 11 as amended recites a network interface apparatus that includes, *inter alia*, an intermediate driver and a network medium interface that are operatively configured to communicate via special internal communication frames. As discussed above with regard to claim 1, neither Cheng nor Shim teach or suggest use of internal communication frames. Therefore claims 11, 12, 14-16, and 18-20 are patentable over Cheng and Shim, either alone or in combination.

In addition, dependent claim 18 recites use of an identifier that includes an otherwise unused IEEE address that is not used by a currently-operating device. As

09/597,371

E0889

discussed above with regard to claim 3, neither Cheng nor Shim teach or suggest this. Therefore for another reason claim 18 is patentable over Cheng and Shim, either alone or in combination.

Claim 21 as amended recites a network interface apparatus that includes, *inter alia*, means for controlling a physical layer device by passing control information through a media access controller, wherein the means for controlling includes means for creating and sending special internal communication frames which include the control information. As is evident from the above discussion, neither Cheng nor Shim teach or suggest controlling a physical layer by passing control information in internal communication frames. Therefore claims 21, 22, 24, and 25 are patentable over Cheng and Shim, either alone or in combination.

Newly-Added Claims

Newly-added dependent claims 26-28 are patentable for at least the reasons for the patentability of their respective base claims. In addition, neither Cheng nor Shim are believed to teach or suggest the additional recited features of claims 26-28, since neither Cheng nor Shim teach or suggest using internal communication frames that do not pass outside of a network interface apparatus.

Conclusion

For at least the foregoing reasons, withdrawal of the rejections of the claims is respectfully requested, in which event this application would be in condition for allowance. Should the Examiner believe that a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact Applicant's undersigned attorney at the telephone number listed below.


A check for \$910.00 is enclosed for the fees for filing a one-month extension of time, and for the filing of a request for continued examination. In the event any

09/597,371

E0889

additional fees are due in connection with the filing of this paper, the Commissioner is authorized to charge those fees to Deposit Account No. 18-0988 (Charge No. AMDSP354US).

Respectfully submitted,
RENNER, OTTO, BOISSELLE & SKLAR, LLP

By 
Jonathan A. Platt
Reg. No. 41,255

1621 Euclid Avenue
Nineteenth Floor
Cleveland, Ohio 44115
(216) 621-1113
(216) 621-6165 (fax)